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CLAIMS

97/4804

1. A mining machine, comprising:

an elongated frame member having a front portion, a rear portion, a top portion and two lateral sides;

mining means operably attached to said front portion of said elongated frame member for dislodging material from a seam upon contact therewith to form an entry therein having a floor, a roof and two side walls;

at least one first propulsion means attached to said elongated frame member for propelling said mining machine on a surface;

at least one second propulsion means pivotally attached to a corresponding lateral side of said elongated frame member and being selectively pivotable between a first extended position wherein said second propulsion means engages a corresponding side wall of said entry and a second retracted position wherein said second propulsion means is adjacent said corresponding lateral side of said elongated frame member such that said second propulsion means does not engage said corresponding side wall of said entry;

pivot means attached to said elongated frame member and each said second propulsion means for selectively pivoting each said second propulsion means between said first extended position and said second retracted position; and

conveying means operably supported on said elongated frame member for conveying said dislodged material from said front portion of said elongated frame member to said rear portion thereof for discharge therefrom.

2. The mining machine of claim 1 wherein each said first propulsion means comprises an endless driven member

operably attached to each said lateral side of said elongated frame member and wherein each said second propulsion means comprises an endless driven member.

3. The mining machine of claim 1 wherein each said pivot means comprises at least one hydraulic cylinder corresponding to each said second propulsion means.

4. The mining machine of claim 1 wherein said conveying means comprises at least one endless driven chain operably supported on said elongated frame member and extending from said front portion to said rear portion thereof, each endless driven chain having a plurality of scraper pads attached thereto for urging said material from the front portion of said elongated frame to the rear portion of said elongated frame.

5. The mining machine of claim 1 wherein each said first propulsion means comprises a first endless driven member attached to each said lateral side of said elongated frame member for propelling said mining machine on a surface and wherein each said second propulsion means comprises a second endless driven member pivotally attached to a corresponding lateral side of said elongated frame member and being selectively pivotable between a first extended position wherein said second endless driven member engages a corresponding side wall of said entry and a second retracted position wherein said second endless driven member is adjacent said corresponding lateral side of said elongated frame member such that said second endless driven member does not engage said corresponding side wall of said entry and wherein each said pivot means comprises at least one

hydraulically powered cylinder attached to said elongated frame member and each said second endless driven member for selectively pivoting each said second endless driven member between said first extended position and said second retracted position and wherein said conveying means comprises at least one endless driven chain operably supported on said elongated frame member and extending from said front portion to said rear portion thereof, each endless driven chain having a plurality of scraper pads attached thereto for urging said material from the front portion of said elongated frame to the rear portion of said elongated frame.

6. A mining machine comprising:

an elongated frame member having a front portion, a rear portion, a top portion, two lateral sides and a longitudinal axis extending the length thereof;

mining means operably attached to said front portion of said elongated frame member for dislodging material from a seam upon contact therewith;

at least one first propulsion means attached to said elongated frame member for propelling said mining machine on a surface;

a propulsion module having a front portion, a rear portion and two lateral side portions and second propulsion means attached thereto for propelling said propulsion module on a surface and providing additional propulsion to said elongated frame member;

means for pivotably attaching said propulsion module to said rear portion of said elongated frame such that said propulsion module can rotate about said longitudinal axis

relative to said elongated frame member and a first horizontal pivot axis that is substantially transverse to said longitudinal axis and a second vertical axis substantially perpendicular to said first horizontal axis; and

conveying means operably supported on said elongated frame member and said propulsion module for conveying said dislodged material from said front portion of said elongated frame member to the rear portion of said propulsion module for discharge therefrom.

7. The mining machine of claim 6 wherein said means for pivotally attaching said propulsion module to said elongated frame member comprises:

a first ball bearing assembly attached to said propulsion module and having a first pin that extends vertically to define said vertical axis; and

a second ball bearing assembly attached to said elongated frame, said second ball bearing assembly having a second horizontal pin that defines said transverse horizontal axis, said second horizontal pin being supported by said vertical axis such that said horizontal pin can pivot relative thereto.

8. The mining machine of claim 6 further comprising steering means attached to said propulsion module and said elongated frame member for selectively pivoting said propulsion module relative to said elongated frame about said vertical axis.

9. The mining machine of claim 8 wherein said steering means comprises at least one hydraulic cylinder.

10. The mining machine of claim 6 wherein each said first propulsion means comprises a first endless driven member operably attached to each said lateral side of said elongated frame member and wherein said second propulsion means comprises a second endless driven member operably attached to each said lateral side of said propulsion module.

11. The mining machine of claim 6 wherein said conveying means comprises at least one endless driven chain operably supported on said elongated frame member and said propulsion module extending from said front portion of said elongated frame member to the rear portion of said propulsion module, each endless driven chain having a plurality of scraper pads attached thereto for urging said material from the front portion of said elongated frame member to the rear portion of said propulsion module for discharge therefrom.

12. A machine of claim 1 or claim 6, substantially as herein described and illustrated.

13. A new machine, substantially as herein described.

DATED THIS 30TH DAY OF MAY 1997
G. L. ERLANK
ADAMS & ADAMS
APPLICANTS PATENT ATTORNEYS

CLEAN COPIES AS FILED
DATED THIS 9th DAY OF DECEMBER 1997

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